

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C.20231
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year) 14 March 2000 (14.03.00)	
International application No. PCT/GB99/02338	Applicant's or agent's file reference SMC/RC/P4108
International filing date (day/month/year) 20 July 1999 (20.07.99)	Priority date (day/month/year) 20 July 1998 (20.07.98)
Applicant AUSTIN, Kenneth	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:

18 February 2000 (18.02.00)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Olivia RANAIVOJAONA

Telephone No.: (41-22) 338.83.38

PCT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

ROYSTONS
Tower Building
Water Street
Liverpool
Merseyside L3 1BA
ROYAUME-UNIDate of mailing (day/month/year)
17 August 2000 (17.08.00)Applicant's or agent's file reference
SMC/RC/P4108

IMPORTANT NOTIFICATION

International application No.
PCT/GB99/02338International filing date (day/month/year)
20 July 1999 (20.07.99)

1. The following indications appeared on record concerning:

☒ the applicant ☐ the inventor ☐ the agent ☐ the common representative

Name and Address

DANMERE LIMITED
Whitehall
75 School Lane
Hartford
Northwich
Cheshire CW8 1PF
United Kingdom

State of Nationality

GB

State of Residence

GB

Telephone No.

Facsimile No.

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐ the person ☒ the name ☒ the address ☐ the nationality ☐ the residence

Name and Address

4TV HOUSE
13-15 Winnington Street
Northwich
Cheshire
CW8 1AQ
United Kingdom

State of Nationality

GB

State of Residence

GB

Telephone No.

Facsimile No.

Teleprinter No.

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

☒ the receiving Office ☐ the designated Offices concerned
☐ the International Searching Authority ☒ the elected Offices concerned
☒ the International Preliminary Examining Authority ☐ other:The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Authorized officer

I. Britel

Facsimile No.: (41-22) 740.14.35

Telephone No.: (41-22) 338.83.38

124.
PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : G11B 27/11, 27/28, 27/10, 27/34, 27/36, G06F 17/30, H04N 5/14, 5/44, 5/445		A1	(11) International Publication Number: WO 00/05718
			(43) International Publication Date: 3 February 2000 (03.02.00)
(21) International Application Number: PCT/GB99/02338		(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 20 July 1999 (20.07.99)		Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
(30) Priority Data: 9815638.3 20 July 1998 (20.07.98) GB			
(71) Applicant (for all designated States except US): DANMERE LIMITED [GB/GB]; Whitehall, 75 School Lane, Hartford, Northwich, Cheshire CW8 1PF (GB).			
(72) Inventor; and (75) Inventor/Applicant (for US only): AUSTIN, Kenneth [GB/GB]; Weaverham Grange, 7 Beechwood Avenue, Hartford, Northwich, Cheshire CW8 3AR (GB).			
(74) Agent: ROYSTONS; Tower Building, Water Street, Liverpool, Merseyside L3 1BA (GB).			
(54) Title: IDENTIFICATION OF VIDEO STORAGE MEDIA			
(57) Abstract <p>A method of generating data for identifying a video storage media comprising the steps of (1) generating from the contents of the media a data sequence representing the picture and/or the audio and/or data content of the video medium, (2) combining said data sequence with position information and/or picture and/or text and/or data or other information. It also provides a system for controlling a video recorder or other media device for selective enabling and disabling of associated functions. A graphical user interface is adapted to display information relating to television program content and/or data content from other sources such as the Internet and video recorder or other media device content and to display information relating to one or more video tapes or other media contents.</p>			

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakhstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference SMC/RC/P4108	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/GB 99/ 02338	International filing date (day/month/year) 20/07/1999	(Earliest) Priority Date (day/month/year) 20/07/1998
Applicant DANMERE LIMITED et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/02338

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G11B27/11 G11B27/28 G11B27/10 G11B27/34 G11B27/36
 G06F17/30 H04N5/14 H04N5/44 H04N5/445

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G11B G06F H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 92 04801 A (INSIGHT TELECAST INC) 19 March 1992 (1992-03-19) the whole document	18-24
A	---	14, 16, 25-29
A	EP 0 838 820 A (NIPPON ELECTRIC CO) 29 April 1998 (1998-04-29) column 5, line 7 - line 14 column 8, line 36 - column 12, line 51	1, 5-14, 16, 17
A	---	22, 24, 25, 29
	--- -/-	

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

- "A" document defining the general state of the art which is not considered to be of particular relevance
 "E" earlier document but published on or after the international filing date
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
 "O" document referring to an oral disclosure, use, exhibition or other means
 "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

2 December 1999

Date of mailing of the international search report

09/12/1999

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
 Fax: (+31-70) 340-3016

Authorized officer

Daalmans, F

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/02338

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>HANJALIC A ET AL: "AUTOMATION OF SYSTEMS ENABLING SEARCH ON STORED VIDEO DATA" PROCEEDINGS OF SPIE, US, BELLINGHAM, SPIE, vol. 3022, 13 February 1997 (1997-02-13), page 427-438 XP000742399 ISBN: 0-8194-2433-1 the whole document</p> <p>---</p>	1-4, 6, 8, 9, 11, 14-16, 22, 24, 25, 29
A	<p>EP 0 472 806 A (INST PERSONALIZED INFORMATION) 4 March 1992 (1992-03-04) the whole document</p> <p>---</p>	1-14, 29
A	<p>WO 97 40454 A (PHILIPS ELECTRONICS NV ; PHILIPS NORDEN AB (SE)) 30 October 1997 (1997-10-30) the whole document</p> <p>---</p>	1-14, 29
A	<p>EP 0 713 334 A (MATSUSHITA ELECTRIC IND CO LTD) 22 May 1996 (1996-05-22)</p> <p>abstract column 5, line 39 - column 6, line 37 column 19, line 6 - column 22, line 31</p> <p>---</p>	1, 5-7, 10-16, 22, 24, 25, 29
A	<p>US 5 532 833 A (HONG JUNG-KOOK ET AL) 2 July 1996 (1996-07-02)</p> <p>the whole document</p> <p>---</p>	1, 5-7, 10, 12-14, 16, 22, 24-26, 29
A	<p>EP 0 692 790 A (HITACHI LTD) 17 January 1996 (1996-01-17)</p> <p>the whole document</p> <p>---</p>	1, 5, 10-14, 16, 18-29
A	<p>EP 0 731 469 A (HITACHI LTD) 11 September 1996 (1996-09-11) the whole document</p> <p>-----</p>	1, 5-7, 9-16, 29

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 99/02338

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 9204801	A	19-03-1992	CA 2091160 A	11-03-1992
			EP 0548286 A	30-06-1993
			JP 10208328 A	07-08-1998
			JP 6504165 T	12-05-1994
			US 5353121 A	04-10-1994
			US 5727060 A	10-03-1998
			US 5479268 A	26-12-1995
			US 5532754 A	02-07-1996
			US 5790198 A	04-08-1998
			US 5619274 A	08-04-1997
			US 5949954 A	07-09-1999
			US 5479266 A	26-12-1995
			US 5809204 A	15-09-1998
			US 5808608 A	15-09-1998
EP 0838820	A	29-04-1998	JP 10136312 A	22-05-1998
EP 0472806	A	04-03-1992	JP 2863818 B	03-03-1999
			JP 4111181 A	13-04-1992
			DE 69120001 D	11-07-1996
			DE 69120001 T	24-10-1996
			US 5083860 A	28-01-1992
WO 9740454	A	30-10-1997	US 5870754 A	09-02-1999
			EP 0842478 A	20-05-1998
			JP 11509025 T	03-08-1999
EP 0713334	A	22-05-1996	CN 1151081 A	04-06-1997
			JP 8237592 A	13-09-1996
			US 5822493 A	13-10-1998
US 5532833	A	02-07-1996	NONE	
EP 0692790	A	17-01-1996	JP 8032922 A	02-02-1996
			CN 1121621 A	01-05-1996
			US 5761371 A	02-06-1998
EP 0731469	A	11-09-1996	CN 1137154 A	04-12-1996
			JP 8315546 A	29-11-1996

INTERNATIONAL SEARCH REPORT

International application No.

PCT/GB 99/ 02338

Box III TEXT OF THE ABSTRACT (Continuation of Item 5 of the first sheet)



The part beginning with the words "The method (line 5)"
and ending in the words "aid selection (line 14)" is deleted.
line 15: Delete "The invention" and replace by "It"
line 16: Delete "comprising.... other command" (line 22)
line 23: after "interface" insert "is"
line 25: after "content," delete "wherein...."overwriting"(line 30)
line 31: Delete " A graphicaladapted" and replace by "and"
line 32: delete "wherein until the end of the abstract."

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference SMC/RC/P4108		FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB99/02338	International filing date (day/month/year) 20/07/1999	Priority date (day/month/year) 20/07/1998	
International Patent Classification (IPC) or national classification and IPC G11B27/11			
Applicant 4TV HOUSE et al.			
<p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 11 sheets, including this cover sheet.</p> <p><input checked="" type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of 6 sheets.</p>			
<p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input checked="" type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input checked="" type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input checked="" type="checkbox"/> Certain defects in the international application VIII <input checked="" type="checkbox"/> Certain observations on the international application 			
Date of submission of the demand 18/02/2000		Date of completion of this report 13.11.2000	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax +49 89 2399 - 4465		Authorized officer Schepens, A Telephone No. +49 89 2399 2627 	

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**International application No. **PCT/GB99/02338****I. Basis of the report**

1. This report has been drawn on the basis of *(substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments (Rules 70.16 and 70.17).)*

Description, pages:

1-20 as originally filed

Claims, No.:

1-28 as received on 16/10/2000 with letter of 12/10/2000

Drawings, sheets:

1-9 as originally filed

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the International search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of International preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**International application No. **PCT/GB99/02338**☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.☒ claims Nos. 12.

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):
see separate sheet☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.☐ no international search report has been established for the said claims Nos. .

2. A meaningful international preliminary examination report cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.☐ the computer readable form has not been furnished or does not comply with the standard.**IV. Lack of unity of invention**

1. In response to the invitation to restrict or pay additional fees the applicant has:

☐ restricted the claims.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**International application No. **PCT/GB99/02338**

- ☒ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.
2. ☐ This Authority found that the requirement of unity of invention is not complied and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with.
- ☒ not complied with for the following reasons:
see separate sheet
4. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this report:
- ☒ all parts.
- ☐ the parts relating to claims Nos. .

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Yes:	Claims	2-4,7,8,10,13-15,17-20,22,24-27
	No:	Claims	1,5,6,9,11,16,21,23,28
Inventive step (IS)	Yes:	Claims	
	No:	Claims	2-4,7,8,10,13-15,17-20,22,24-27
Industrial applicability (IA)	Yes:	Claims	1-28
	No:	Claims	

**2. Citations and explanations
see separate sheet****VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:
see separate sheet

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**International application No. **PCT/GB99/02338**

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/02338

Point III:

1. The omnibus claim 12 is so indefinite that no meaningful examination can be carried out.

Point IV:

2. The various independent claims merely have in common a video medium. Therefore, they are not linked by a common inventive concept (Rule 13.1PCT).

The separate inventions/groups of invention are:

- I : claims 1-16 and 23 relating to a method of indexing a video storage media using data derived from the content combined with position data;
- II : claims 17-20 relating to detect a power-on status of a player by detecting presence or absence of a signal;
- III: claims 21-22 relating to free recording space determination;
- IV : claims 24-27 relating to the display of the contents of different sources (such as television, internet, videotape);
- V: claim 29 relating to indexing by storing text data (such as subtitling) and by searching a position by selecting a key word from this stored text data and searching this key word on the media. This invention does not store position data as does invention I and has in common with invention 1 the mere storage of content data which is merely an obvious catalogisation of media.

Point V:

1. Reference is made to the following documents:

D1: EP-A-0 169 597

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/02338

D2: WO-A- 92 04801

D3: HANJALIC A ET AL: "AUTOMATION OF SYSTEMS ENABLING SEARCH
ON STORED VIDEO DATA" PROCEEDINGS OF SPIE,US,BELLINGHAM,
SPIE, vol. 3022, 13 February 1997 (1997-02-13), page 427-438
XP000742399 ISBN: 0-8194-2433-1

D4: WO-A- 97 40454

D5: EP-A-0 713 334

D6: EP-A-0 692 790

2. D1 discloses to identify a plurality of compact discs by subtracting data from the subcode (page 2, lines 27-31) and storing these identifiers in a memory of the player together with positional information (page 7, lines 25-35). This can also be done for video media (page 2, lines 12-15).

According to the first invention as identified under point IV the audio or video content of the frames of the video medium are used for identification and are stored together with the position of said data.

Thus, D1 is not relevant for the first invention.

3. D4 discloses to derive signatures from MPEG encoded video clips and storing them in a database together with their location (abstract). In the chapter "Background of the invention", reference is made to the various prior art disclosing the use of key frames or text annotations (page 2, lines 26-31. As key frames, the DC values of 8x8 pixel blocks are mentioned (page 2, lines 1-25). According to the invention of D4, such images are used to identify and retrieve video clips from the database (page 4, lines 22-28).

According to the first invention, as primarily defined in claim 1, a data sequence is derived from the picture and/or audio content of video frames of the medium content. Such definition covers the extraction of a low resolution image from an MPEG encoded video signal on the medium.

Hence, the subject matter of claims 1, 5, 6, 9, 11 and 16 is known from D4.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/02338

According to the description such is done using conventional audio and video signals from a conventional video recorder. This is not expressed in the claims. Besides, it is considered to be obvious to translate the digital technique of D4 to conventional video recorders.

4. With respect to the generation of key frames for indexing a video medium at different locations, reference is made to D3, disclosing to extract key frames by detecting the rate of change from frame to frame and detecting in this way the first frame of each shot (chapter 3). According to chapter 4 the DC sequence of the MPEG stream is used as key frame ("averaged blocks" in line 3 of the second paragraph). Also audio data or textual data can be used (chapter 5, first paragraph). According to chapter 5.2 and as can be seen in figure 6, a number of icons is presented on the screen.

It is considered to be obvious to the skilled man using the identification principle of D4 to add the indexing of D3 as both refer to the same principle of deriving key frames (The DC image of the MPEG stream).

With respect to claims 7 and 14 reference is made to D5. D5 discloses to have such key frames at regular distances for selection and search (column 20, lines 32-47 and column 21, line 47- column 22, line 2).

Hence, the subject matter of the remaining claims of the first group identified under point IV is obvious.

6. Claim 17 merely describes the automatic version of what a user normally does, namely concluding from the absence of signals that the recorder probably is not switched on. Such is obvious. The same applies to claims 18 - 20. In this respect reference is made to D2, page 19, lines 20-21 and figure 13, reference numeral 100, disclosing the display of a tape motion indicator.
7. With respect to claim 21 reference is made to D2, abstract and accompanying picture disclosing the provision of a display of television programs on various channels with the possibility to select programs for recording. The time duration of these programs is also visible in relation to each other. According to page 15, line

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/02338

22, the remaining recording time is displayed too. Furthermore there is provided a tape index screen showing what is on several tapes (pages 16 and 17). This tape index may contain other information such as theme category. Hence, the subject matter of claims 21 and 23 is not novel. In this respect it is noted that D2 relates to the display of textual data. In claims 21 and 23 the display is not restricted to picture data. If, then, having the display possibilities of for instance D4, it would be obvious to display pictures for selection.

8. Additionally to what is disclosed in D2 (point 7), D6 discloses to save data such as enjoyed or not yet enjoyed (column 6, lines 12-24, and column 7, lines 5-9).

Hence, the subject matter of claim 22 is obvious.

9. The subject matter of claims 24-27 is the obvious result of applying the key-frame indexing of D4 to the television schedule system of D2 because having the display possibility of D4 renders it obvious for the user of the interface of D2 to improve his interface with the display possibilities of D4.
10. D3, chapter 5, third paragraph, first four lines and D4, page 2, lines 29-31, refers to the use of textual data for retrieval purposes. Hence, the subject matter of claim 28 is not novel. In this respect it is noted that claim 28 is not restricted to the recording of conventional video data and that "subtitling or closed caption data" is not restricted to such data present in conventional (i.e. not MPEG or so) video signals.

Point VII:

1. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1-D6 is not mentioned in the description, nor are these documents identified therein.
2. The independent claims are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (D1-D6, depending on the respective invention) being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remain-

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/02338

ing features being included in the characterising part (Rule 6.3(b)(ii) PCT).

3. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

Point VIII:

1. Although claims 1, 11, 13 and 15 as well as 17 and 20 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought ..and/or.. in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness. Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection.

Hence, these claims do not meet the requirements of Article 6 PCT.

2. In claim 2 "the part of the frame being analysed" has no antecedent. Furthermore, it is not clear what is meant by "converted into an array".
3. In claim 4 it is not clear what is meant by "frame value".
4. In claim 6 the "data sequences which are stored in memory" has no antecedent (sequences in plural). Furthermore, "one frame" has no antecedent in claim 1 (the sequence is not defined as containing frames).
5. In claim 9 "Video tape" has no antecedent (is defined for the first time in claim 10) and is used together with "video storage medium". The term "frame value" is not defined.
6. In claim 16 it is not clear whether the claim should cover the apparatus as such or merely the use of the apparatus.

INTERNATIONAL PRELIMINARY

International application No. PCT/GB99/02338

EXAMINATION REPORT - SEPARATE SHEET

7. Claims 17-20 are in the category "system" but are defined by method steps.

16-10-2000

GB 009902338

21

CLAIMS

1. A method of generating data for identifying a video storage media comprising the steps of (1) generating from the contents of the media, a data sequence derived from the picture and/or the audio content of video frames of the video medium, (2) appending to said data sequence with at least position information and optionally video images, and storing same in memory means.
2. A method as claimed in claim 1 in which a video frame signal is converted into an array and a part of the frame being analysed comprises a discrete array taken from the whole frame array.
3. A method as claimed in claim 1 or 2 in which the video frame is converted into a blocked array of summed pixel values.
4. A method as claimed in claim 3 in which the block array is compared with the block array of the previous frame and the pixel value that is most changed is stored as a frame value.
5. A method as claimed in anyone of claims 1 to 4 when used to create a series of data sequences for a plurality of video storage media.
6. A method as claimed in anyone of claims 1 to 5 in which some of the data sequences which are stored in the memory have appended thereto data which facilitates reproduction of the image of at least one frame of the sequence.
7. A method as claimed in claim 6 in which the memory contains stored images of a

16-10-2000

GB 009902338

plurality of frames taken from discrete intervals along the video medium.

8. A method as claimed in claims 6 or 7 and further comprising storing audio signals associated with at least some of said data sequences.
9. A method of generating data for identifying a video storage media as claimed in anyone of claims 1 to 8 comprising the steps of (1) reading a video storage medium and generating an electronic signal of at least part of each frame of a sequence frames of the video tape, (2) using the signal to generate a frame value for each frame in the sequence, and generating and storing a resulting frame value sequence, and (5) repeating the process for further frames of the video storage medium to generate a series of frame value sequences which are stored in memory.
10. A method as claimed in anyone of the preceding claims in which the video storage media is a video tape.
11. A method of identifying a video storage media by generating at least one data sequence from the video and/or audio content of the storage media and comparing the resulting data sequence with a series of data sequences stored in memory to establish a match or relationship.
12. A method of generating video storage media data substantially as hereinbefore described with reference to the accompanying drawings.
13. A memory means be it an electronic memory or a video storage media storing an index of video storage media contents, be it magnetic or optical, the index comprising a plurality of images corresponding to each of the contents of the a video

storage medium at different positions thereof and wherein the index is adapted to be read and displayed on a television screen, enabling the selection of one or more of a plurality of scenes of the recorded content and wherein a related off-media sequence or signal derived from and related to the video and/or audio contents of a video storage medium is used to determine the content of the video tape and the position of the images on the video tape.

14. A memory means as claimed in claim 13 in which more than one of the plurality of images are visible simultaneously.
15. A method of accessing material recorded on a video storage media comprising recovering from memory an index of the storage media contents and displaying on a television screen in the form of a plurality of images corresponding to different positions of the storage media, with or without accompanying text, each image having an associated data sequence or data value derived from the video or audio content of the video, storage media and which defines its position on the video storage media and wherein selection of one of the images instigates a search for the corresponding position on a storage media by determining the current media position and comparing the resulting data sequence or data value with a series of data sequences or data value stored in memory until a match or a relationship is established and comparing the location thereof with the location of the selected position and instigating operation of the video storage media recorder transport according to programmed control to locate the desired position using characterisation

data from the video storage media recorder or further position checks.

16. Apparatus when used to perform anyone of the methods of claims 1 to 15, comprising means to generate from the contents of the media a data sequence derived from the picture and/or audio content of the video frames of the video medium, means to determine tape position, means to capture video frame images, and memory means for storing the information.
17. A closed loop video recorder or other media device control system for determining the status of a video recorder or other media device, the system comprising means to (1) issue a play command or code or sequence, (2) verify that signals or data are received, (3) use said signals or data or absence of signals or data to determine if said video recorder or other media device is powered on.
18. A close loop control system as claimed in claim 17 further comprising the steps of, (1) checking that the tape or media position is substantially unchanged from a predetermined position, (2) issuing a record command or code or sequence.
19. A closed loop control system as claimed in 17 or 18 further comprising the step of verifying the signals or data received from said video recorder or other media device correspond to a selected program designated for recording.
20. A system for controlling a video recorder or other media device for selective enabling and disabling of associated functions, comprising the steps of, (1) periodically assessing the presence or content of signals and/or data output from said video recorder or other media device to determine if the device is operating, (2)

15-10-2000

GB 009902338

determining if said video recorder or other media device is scheduled and/or permitted to operate at the time of assessing the signals and/or data, (3) if required, issuing a command or code or sequence to disable said video recorder or other media device by a power off command and/or a stop command and/or a pause or other command.

21. A graphical user interface adapted to display information relating to television program content and/or data content from other sources such as the Internet and video recorder or other media device content, wherein selections are made from said television program content and/or data content from other sources for recording onto video tape or other media, whereby calculation of available free space on said video tape or other media is displayed and whereby if insufficient space is available for recording original selections may be modified and/or some or all of the video tape or other media contents may be selected for overwriting.
22. A graphical user interface as claimed in 21 when adapted to display the status of items recorded on video tape or other media as to whether the recorded item has been viewed.
23. A graphical user interface is adapted to display information relating to one or more video tapes or other media contents, as determined according to the method of any one of claims 1 to 10 and wherein the contents of said video tape or other media is displayed graphically, according to the category of the recorded material.
24. A graphical user interface adapted to display information relating to television

10-10-2000

GB 009902338

program content and/or data content from other sources such as the Internet and/or video recorder or other media device content, wherein said display information comprises a visual representation such as a picture indicating the contents of said television program content and/or data content from other sources such as the Internet and/or video recorder or other media device content.

25. A graphical user interface as claimed in claim 24 in which said visual representations are stored in memory, at least temporarily, to permit on-screen display.
26. A graphical user interface as claimed in claims 24 or 25 wherein the graphical user interface is adapted to display program content information by category such as what is currently showing and/or what will be showing next and/or what is showing that day and/or what will be showing that week.
27. A graphical user interface adapted to display information as claimed in claims 24, 25 or 26 further adapted to filter said television program content by category of user preferences such as channel number or type of television program or other category.
28. A video recorder or other media device index generation method comprising the steps of, (1) recording a television broadcast, (2) recording in a memory means a copy of subtitling or closed caption data, (3) using said subtitling or closed caption data to search for key words or phrases to identify a scene from one or more video tapes or other media corresponding to said key word, (4) issuing a command or code or sequence to position said video tape or other media at the scene corresponding to said key word.

PATENT COOPERATION TREATY

PCT

INFORMATION CONCERNING ELECTED
OFFICES NOTIFIED OF THEIR ELECTION

(PCT Rule 61.3)

From the INTERNATIONAL BUREAU

To:

ROYSTONS
Tower Building
Water Street
Liverpool
Merseyside L3 1BA
ROYAUME-UNI

Date of mailing (day/month/year)

14 March 2000 (14.03.00)

Applicant's or agent's file reference

SMC/RC/P4108

IMPORTANT INFORMATION

International application No.

PCT/GB99/02338

International filing date (day/month/year)

20 July 1999 (20.07.99)

Priority date (day/month/year)

20 July 1998 (20.07.98)

Applicant

DANMERE LIMITED et al

1. The applicant is hereby informed that the International Bureau has, according to Article 31(7), notified each of the following Offices of its election:

AP : GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW

EP : AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

National : AU, BG, BR, CA, CN, CZ, DE, IL, JP, KP, KR, MN, NO, NZ, PL, RO, RU, SE, SK, US

2. The following Offices have waived the requirement for the notification of their election; the notification will be sent to them by the International Bureau only upon their request:

EA : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

OA : BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

National : AE, AL, AM, AT, AZ, BA, BB, BY, CH, CU, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU,
ID, IN, IS, KE, KG, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MW, MX, PT, SD, SG, SI, SL, TJ,
TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW

3. The applicant is reminded that he must enter the "national phase" before the expiration of 30 months from the priority date before each of the Offices listed above. This must be done by paying the national fee(s) and furnishing, if prescribed, a translation of the international application (Article 39(1)(a)), as well as, where applicable, by furnishing a translation of any annexes of the international preliminary examination report (Article 36(3)(b) and Rule 74.1).

Some offices have fixed time limits expiring later than the above-mentioned time limit. For detailed information about the applicable time limits and the acts to be performed upon entry into the national phase before a particular Office, see Volume II of the PCT Applicant's Guide.

The entry into the European regional phase is postponed until 31 months from the priority date for all States designated for the purposes of obtaining a European patent.

RECEIVED
14 MAR 2000
PCT/GB99/02338

The International Bureau of WIPO

34, chemin des Colombettes

1211 Geneva 20, Switzerland

Authorized officer:

Olivia RANAIVOJAONA

Facsimile No. (41-22) 740.14.35

Telephone No. (41-22) 338.83.38

PATENT COOPERATION TREATY

From the:
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:
ROYSTONS
Tower Building
Water Street
Liverpool, Merseyside L3 1BA
GRANDE BRETAGNE

FILE NO P4108	TECHNICAL SMC
DEADLINE 29.9.2000	
COMPUTER ENTERED	CHECKED

PCT

② WRITTEN OPINION

(PCT Rule 66)

Date of mailing (day/month/year)		29.08.2000
Applicant's or agent's file reference SMC/LF/P4108		REPLY DUE within 1 month(s) from the above date of mailing
International application No. PCT/GB99/02338	International filing date (day/month/year) 20/07/1999	Priority date (day/month/year) 20/07/1998
International Patent Classification (IPC) or both national classification and IPC G11B27/11		
Applicant DANMERE LIMITED et al.		

- This written opinion is the first drawn up by this International Preliminary Examining Authority.
- This opinion contains indications relating to the following items:
 - ☒ Basis of the opinion
 - ☐ Priority
 - ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - ☒ Lack of unity of invention
 - ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - ☐ Certain document cited
 - ☒ Certain defects in the international application
 - ☒ Certain observations on the international application
- The applicant is hereby invited to reply to this opinion.

When? See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

How? By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

Also: For an additional opportunity to submit amendments, see Rule 66.4.
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis.
For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.
- The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 20/11/2000.

Name and mailing address of the international preliminary examining authority:



European Patent Office
D-80298 Munich
Tel. +49 89 2399 - 0 Tx: 523656 apmu d
Fax: +49 89 2399 - 4465

Authorized officer / Examiner

Schepens, A

Formalities officer (incl. extension of time limits)

Slater, S

Telephone No. +49 89 2399 2565



WRITTEN OPINIONInternational application No. **PCT/GB99/02338****I. Basis of the opinion**

1. This opinion has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"*):

Description, pages:

1-20 as originally filed

Claims, No.:

1-29 as originally filed

Drawings, sheets:

1-9 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

3. This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been and will not be examined in respect of:

- ☐ the entire international application,
☒ claims Nos. 13,

because:

- ☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

WRITTEN OPINIONInternational application No. **PCT/GB99/02338**

- ☒ the description, claims or drawings (*Indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

see separate sheet

- ☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.
- ☐ no international search report has been established for the said claims Nos. .

IV. Lack of unity of invention

1. In response to the invitation (Form PCT/IPEA/405) to restrict or pay additional fees, the applicant has:

- ☐ restricted the claims.
- ☒ paid additional fees.
- ☐ paid additional fees under protest.
- ☐ neither restricted nor paid additional fees.

2. ☐ This Authority found that the requirement of unity of invention is not complied with for the following reasons and chose, according to Rule 68.1, not to invite the applicant to restrict or pay additional fees:

3. Consequently, the following parts of the international application were the subject of international preliminary examination in establishing this opinion:

- ☒ all parts.
- ☐ the parts relating to claims Nos. .

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	1-3,5,6,10,11,17,22,24,29
Inventive step (IS)	Claims	4,7,8,9,12,14-16,18-21,23,25-28
Industrial applicability (IA)	Claims	

WRITTEN OPINIONInternational application No. **PCT/GB99/02338**

2. Citations and explanations**see separate sheet****VII. Certain defects in the international application**

The following defects in the form or contents of the international application have been noted:

see separate sheet**VIII. Certain observations on the international application**

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

see separate sheet

**WRITTEN OPINION
SEPARATE SHEET**International application No. PCT/GB99/02338

Point III:

1. The omnibus claim 13 is so indefinite that no meaningful examination can be carried out.

Point IV:

1. Reference is made to the invitation to pay additional fees (Form 405).

Point V:

1. Reference is made to the following documents:

D1: EP-A-0 169 597

D2: WO-A- 92 04801

D3: HANJALIC A ET AL: "AUTOMATION OF SYSTEMS ENABLING SEARCH
ON STORED VIDEO DATA" PROCEEDINGS OF SPIE,US,BELLINGHAM,
SPIE, vol. 3022, 13 February 1997 (1997-02-13), page 427-438
XP000742399 ISBN: 0-8194-2433-1

D4: WO-A- 97 40454

D5: EP-A-0 713 334

D6: EP-A-0 692 790

2. D1 discloses to identify a plurality of compact discs by subtracting data from the subcode (page 2, lines 27-31) and storing these identifiers in a memory of the player together with positional information (page 7, lines 25-35). This can also be done for video media (page 2, lines 12-15).

Thus, the disclosure of D1 is covered by claim 1 for at least one of the many alternatives given in claim 1 so that the subject matter of claim 1 lacks novelty..

The same applies to claims 5, 10, 11 and 17.

3. D4 discloses to derive signatures from MPEG encoded video clips and storing them in a database together with their location (abstract). In the chapter "Background of the invention", reference is made to the various prior art disclosing

**WRITTEN OPINION
SEPARATE SHEET**

International application No. PCT/GB99/02338

the use of key frames or text annotations (page 2, lines 26-31. As key frames, the DC values of 8x8 pixel blocks are mentioned (page 2, lines 1-25). According to the invention of D4, such images are used to identify and retrieve video clips from the database (page 4, lines 22-28).

Hence, the subject matter of claims 1-3, 5, 6, 10, 11 and 17 is known from D4 too.

4. With respect to the generation of key frames for indexing a video medium at different locations, reference is made to D3, disclosing to extract key frames by detecting the rate of change from frame to frame and detecting in this way the first frame of each shot (chapter 3). According to chapter 4 the DC sequence of the MPEG stream is used as key frame ("averaged blocks" in line 3 of the second paragraph). Also audio data or textual data can be used (chapter 5, first paragraph). According to chapter 5.2 and as can be seen in figure 6, a number of icons is presented on the screen.

It is considered to be obvious to the skilled man using the identification principle of D4 to add the indexing of D2 as both refer to the same principle of deriving key frames (The DC image of the MPEG stream).

Hence, the subject matter of claims 4, 8, 9, 12, 14, 15 and 16 is obvious.

5. D5 discloses to have such key frames at regular distances for selection and search (column 20, lines 32-47 and column 21, line 47- column 22, line 2).

Hence, the subject matter of claims 7 and 14 is obvious.

6. Claim 18 merely describes the automatic version of what a user normally does, namely concluding from the absence of signals that the recorder probably is not switched on. Such is obvious. The same applies to claims 19 - 21. In this respect reference is made to D2, page 19, lines 20-21 and figure 13, reference numeral 100, disclosing the display of a tape motion indicator.

7. With respect to claim 22 reference is made to D2, abstract and accompanying picture disclosing the provision of a display of television programs on various

**WRITTEN OPINION
SEPARATE SHEET**

International application No. PCT/GB99/02338

channels with the possibility to select programs for recording. The time duration of these programs is also visible in relation to each other. According to page 15, line 22, the remaining recording time is displayed too. Furthermore there is provided a tape index screen showing what is on several tapes (pages 16 and 17). This tape index may contain other information such as theme category. Hence, the subject matter of claims 22 and 24 is not novel.

8. Additionally to what is disclosed in D2 (point 7), D6 discloses to save data such as enjoyed or not yet enjoyed (column 6, lines 12-24, and column 7, lines 5-9).

Hence, the subject matter of claim 23 is obvious.

9. The subject matter of claims 25-28 is the obvious result of applying the key-frame indexing of D4 to the television schedule system of D2.
10. D3, chapter 5, third paragraph, first four lines and D4, page 2, lines 29-31, refers to the use of textual data for retrieval purposes. Hence, the subject matter of claim 29 is not novel.

Point VII:

1. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents D1-D6 is not mentioned in the description, nor are these documents identified therein.
2. The independent claims are not in the two-part form in accordance with Rule 6.3(b) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (D1-D6, depending on the respective invention) being placed in the preamble (Rule 6.3(b)(i) PCT) and with the remaining features being included in the characterising part (Rule 6.3(b)(ii) PCT).
3. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

**WRITTEN OPINION
SEPARATE SHEET**

International application No. PCT/GB99/02338

Point VIII:

1. Although claims 1, 9, 11, 12, 14 and 16 as well as 18 and 21 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought ..and/or.. in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore lack conciseness. Moreover, lack of clarity of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is sought, and places an undue burden on others seeking to establish the extent of the protection.

Hence, these claims do not meet the requirements of Article 6 PCT.

2. In claim 1 it is unclear what is meant by "representing" and "combining". Furthermore, the feature "or other information" renders the scope of this claim indefinite. Claim 1 also fails to define what is done with the generated data. ✓
3. Claim 1 refers in "and/or" combinations to various kinds of data not mentioning video frames. The dependent claims mainly relate to video frames are, thus, have no antecedent in claim 1 nor are combinable with most of the alternatives given in claim 1. This also applies to other independent claims. ✓
3. In claim 2 "the part of the frame being analysed" has no antecedent. Furthermore, it is not clear what is meant by "converted into an array". ✓
4. In claim 3 "the video frame" has no antecedent if depending on claim 1 directly. ✓
5. In claim 4 it is not clear what is meant by "frame value". ✓
6. In claim 6 the "data sequences which are stored in memory" has no antecedent. Furthermore, "one frame" has no antecedent in claim 1.
7. In claim 9, "frame" has no antecedent in claim 1. "Video tape" has no antecedent (is defined for the first time in claim 10) and is used together with "video storage

**WRITTEN OPINION
SEPARATE SHEET**

International application No. PCT/GB99/02338

medium". The term "frame value" is not defined.

8. In claim 11 the wording "with the aim of" renders the scope of the claim unclear.
9. In claim 12 the term "related off-media data sequence" is unclear.
10. In claim 14 the category "index" does not represent a physical entity. The category should read "An electronic memory storing ..etc.". Furthermore, the definition in this claim covers a conventional video tape because each image corresponds to a different position. It should be defined that the images are selected ones.
11. In claim 15 the category "index" is not a physical entity.
12. In claim 17 it is not clear whether the claim should cover the apparatus as such or merely the use of the apparatus. Furthermore, as independent claim it should define the means necessary to perform the method.
13. Claims 18-21 are in the category "system" but are defined by method steps.
14. In claim 24 the last part "said category could be...." is superfluous.



EPA/EPO/OEB
D-80299 München
☎ +49 89 2399-0
TX 523 656 epru d
FAX +49 89 2399-4465

Europäisches
Patentamt

European
Patent Office

Office européen
des brevets

Generaldirektion 2

Directorate General 2

Direction Générale 2

Correspondence with the EPQ on PCT Chapter II demands

In order to ensure that your PCT Chapter II demand is dealt with as promptly as possible you are requested to use the enclosed self-adhesive labels with any correspondence relating to the demand sent to the Munich Office.

One of these labels should be affixed to a prominent place in the upper part of the letter or form etc. which you are filing.



Chartered Patent Attorneys European Patent Attorneys
Trade Mark Attorneys
Patents, Trade Marks, Designs

A. J. Lyons BSc MITMA RTMA CPA EPA
S. M. Cardwell BSc RTMA CPA EPA
J. D. Rawlence BSc MSc RTMA RTMA
A. R. Peacock BSc CPA EPA

K. J. Lees BSc MSc CPA EPA
A. J. Rawlence LLB
V. Christie BSc

Consultants:
J. S. Roberts MSc PhD CPA
F. A. Clifford BSc CPA EPA

TOWER BUILDING, WATER STREET,
LIVERPOOL,
L3 1BA.

Tel: 0151-236 5147 & 1417

Fax: 0151-236 2244 & 1247

E-mail: admin@roystons.co.uk

Website: www.roystons.co.uk

The European Patent Office
European Patent Office
Erhardstrasse 27
Munich D-80298
Germany

Our Ref. SMC/RC/P4108

Your Ref.

Date 12th October 2000

Dear Sirs

PCT Patent Application No. PCT/GB99/02338
4TV Limited (formerly Danmere Limited) (P4108)

This letter is in response to the Written Opinion dated 29th August 2000 and we are most grateful for the extension of the response period to 13th October 2000. We enclose a revised set of claims for further consideration in these proceedings and have the following comments on the points raised in the written opinion.

The examiner firstly discusses document D1. Our assessment of this patent is that it discloses a method of using the pre-recorded digital signal stored on audio or videodisks to identify the disk and/or particular selections from the disk. The signal is a digital representation of the original content such as audio. The invention simply stores a copy of portions of the digital signal and correlates these with the signals received from the disk.

No disclosure is made regarding origination of digital sequences from recorded video or audio content. The system according to Hendrik requires a digital disk with pre-existing digital sequences.

In contrast, the data sequences in the present invention are generated from the program content, e.g. video or audio, rather than data associated with a digital storage media. Claim 1 has been amended to delete the reference to 'data'.

Document D4 discloses a method of retrieving video clips based on comparing JPEG or MPEG encoded video sequences. Again this system relies on pre-recorded digital signals (MPEG or JPEG), it does not describe a method of producing signatures from recorded video or audio content such as that found on conventional domestic video recorders.

Document D3 discloses a system for retrieving MPEG encoded video content from a digital storage medium. The system is further adapted to identify scene change in video content based on analysis of the MPEG encoded data, said analysis is used to identify frames that can be used to represent a particular scene in the MPEG encoded video.

European Patent Office12th October 2000Page 2

By contrast the system according to our invention operates on conventional audio or video content associated with a conventional video recorder. Conventional audio or video signals are not digitally represented and are not applicable to the methods taught.

The frames referred to in our claims 4 and 9 are the conventional and continuous video frames of a video signal, they are not key frames resulting from analysis of scene change within an MPEG data stream.

The plurality of images referred to in our claim 14, 15 and 16 are merely video images taken at regular intervals, they do not reflect specific key frames relating to scenes within a video sequence.

In the light of the disclosure of document D5 the features of claim 14 (now claim 13) have been augmented and now stipulate that a data sequence or signal derived from the video and/or audio control of the video storage medium is used to determine the contents of the video tape and the position of the images on the video tape. Original claim 12 has been deleted. It is believed that the combination of video images and the specified method of generating data sequences to identify the position of these images is not known or obvious from the prior art. The features of claims 6 and 7 taken with claim 1 would also be novel and inventive.

Document D2, represents all program material textually. By contrast, the present invention proposes to display all contents visually rather than textually. This approach is a significant improvement over text based systems which can be difficult to read and become tiresome when used frequently. A visual representation of program content allows the viewer to make a quick decision regarding program selection based on familiar visual representations that reflect the program content. A system of this type is a step improvement over existing provisions and is not in commercial use. Accordingly, it is respectfully submitted that it is not reasonable to conclude that it would be obvious to combine D2 and D4. Accordingly, it is respectfully submitted that claims 24-27 (originally 25-28) are not obvious.

As concerns claim 28 (original claim 29), it is respectfully submitted that neither D3 or D4 disclose a system for positioning a video tape to a particular scene based on finding a key word match with closed caption data stored on conventional video tape. D3 and D4 utilise additional and specific textural references created for scene identification rather than pre-existing program subtitle information. Accordingly, it is submitted that claim 28 is novel and inventive.

The matters raised in paragraphs 2-14 of Section VIII have received attention.

We look forward to receiving the results of re-examination in due course.

Yours faithfully

ROYSTONS

Encs.

CLAIMS

1. A method of generating data for identifying a video storage media comprising the steps of (1) generating from the contents of the media, a data sequence derived from the picture and/or the audio content of video frames of the video medium, (2) appending to said data sequence with at least position information and optionally video images, and storing same in memory means.
2. A method as claimed in claim 1 in which a video frame signal is converted into an array and a part of the frame being analysed comprises a discrete array taken from the whole frame array.
3. A method as claimed in claim 1 or 2 in which the video frame is converted into a blocked array of summed pixel values.
4. A method as claimed in claim 3 in which the block array is compared with the block array of the previous frame and the pixel value that is most changed is stored as a frame value.
5. A method as claimed in anyone of claims 1 to 4 when used to create a series of data sequences for a plurality of video storage media.
6. A method as claimed in anyone of claims 1 to 5 in which some of the data sequences which are stored in the memory have appended thereto data which facilitates reproduction of the image of at least one frame of the sequence.
7. A method as claimed in claim 6 in which the memory contains stored images of a

plurality of frames taken from discrete intervals along the video medium.

8. A method as claimed in claims 6 or 7 and further comprising storing audio signals associated with at least some of said data sequences.
9. A method of generating data for identifying a video storage media as claimed in anyone of claims 1 to 8 comprising the steps of (1) reading a video storage medium and generating an electronic signal of at least part of each frame of a sequence frames of the video tape, (2) using the signal to generate a frame value for each frame in the sequence, and generating and storing a resulting frame value sequence, and (5) repeating the process for further frames of the video storage medium to generate a series of frame value sequences which are stored in memory.
10. A method as claimed in anyone of the preceding claims in which the video storage media is a video tape.
11. A method of identifying a video storage media by generating at least one data sequence from the video and/or audio content of the storage media and comparing the resulting data sequence with a series of data sequences stored in memory to establish a match or relationship.
12. A method of generating video storage media data substantially as hereinbefore described with reference to the accompanying drawings.
13. A memory means be it an electronic memory or a video storage media storing an index of video storage media contents, be it magnetic or optical, the index comprising a plurality of images corresponding to each of the contents of the a video

storage medium at different positions thereof and wherein the index is adapted to be read and displayed on a television screen, enabling the selection of one or more of a plurality of scenes of the recorded content and wherein a related off-media sequence or signal derived from and related to the video and/or audio contents of a video storage medium is used to determine the content of the video tape and the position of the images on the video tape.

14. A memory means as claimed in claim 13 in which more than one of the plurality of images are visible simultaneously.
15. A method of accessing material recorded on a video storage media comprising recovering from memory an index of the storage media contents and displaying on a television screen in the form of a plurality of images corresponding to different positions of the storage media, with or without accompanying text, each image having an associated data sequence or data value derived from the video or audio content of the video, storage media and which defines its position on the video storage media and wherein selection of one of the images instigates a search for the corresponding position on a storage media by determining the current media position and comparing the resulting data sequence or data value with a series of data sequences or data value stored in memory until a match or a relationship is established and comparing the location thereof with the location of the selected position and instigating operation of the video storage media recorder transport according to programmed control to locate the desired position using characterisation

data from the video storage media recorder or further position checks.

16. Apparatus when used to perform anyone of the methods of claims 1 to 15, comprising means to generate from the contents of the media a data sequence derived from the picture and/or audio content of the video frames of the video medium, means to determine tape position, means to capture video frame images, and memory means for storing the information.
17. A closed loop video recorder or other media device control system for determining the status of a video recorder or other media device, the system comprising means to (1) issue a play command or code or sequence, (2) verify that signals or data are received, (3) use said signals or data or absence of signals or data to determine if said video recorder or other media device is powered on.
18. A close loop control system as claimed in claim 17 further comprising the steps of, (1) checking that the tape or media position is substantially unchanged from a predetermined position, (2) issuing a record command or code or sequence.
19. A closed loop control system as claimed in 17 or 18 further comprising the step of verifying the signals or data received from said video recorder or other media device correspond to a selected program designated for recording.
20. A system for controlling a video recorder or other media device for selective enabling and disabling of associated functions, comprising the steps of, (1) periodically assessing the presence or content of signals and/or data output from said video recorder or other media device to determine if the device is operating, (2)

determining if said video recorder or other media device is scheduled and/or permitted to operate at the time of assessing the signals and/or data, (3) if required, issuing a command or code or sequence to disable said video recorder or other media device by a power off command and/or a stop command and/or a pause or other command.

21. A graphical user interface adapted to display information relating to television program content and/or data content from other sources such as the Internet and video recorder or other media device content, wherein selections are made from said television program content and/or data content from other sources for recording onto video tape or other media, whereby calculation of available free space on said video tape or other media is displayed and whereby if insufficient space is available for recording original selections may be modified and/or some or all of the video tape or other media contents may be selected for overwriting.
22. A graphical user interface as claimed in 21 when adapted to display the status of items recorded on video tape or other media as to whether the recorded item has been viewed.
23. A graphical user interface is adapted to display information relating to one or more video tapes or other media contents, as determined according to the method of any one of claims 1 to 10 and wherein the contents of said video tape or other media is displayed graphically, according to the category of the recorded material.
24. A graphical user interface adapted to display information relating to television

program content and/or data content from other sources such as the Internet and/or video recorder or other media device content, wherein said display information comprises a visual representation such as a picture indicating the contents of said television program content and/or data content from other sources such as the Internet and/or video recorder or other media device content.

25. A graphical user interface as claimed in claim 24 in which said visual representations are stored in memory, at least temporarily, to permit on-screen display.
26. A graphical user interface as claimed in claims 24 or 25 wherein the graphical user interface is adapted to display program content information by category such as what is currently showing and/or what will be showing next and/or what is showing that day and/or what will be showing that week.
27. A graphical user interface adapted to display information as claimed in claims 24, 25 or 26 further adapted to filter said television program content by category of user preferences such as channel number or type of television program or other category.
28. A video recorder or other media device index generation method comprising the steps of, (1) recording a television broadcast, (2) recording in a memory means a copy of subtitling or closed caption data, (3) using said subtitling or closed caption data to search for key words or phrases to identify a scene from one or more video tapes or other media corresponding to said key word, (4) issuing a command or code or sequence to position said video tape or other media at the scene corresponding to said key word.

PATENT COOPERATION TREATY

PCT

NOTICE INFORMING THE APPLICANT OF THE
COMMUNICATION OF THE INTERNATIONAL
APPLICATION TO THE DESIGNATED OFFICES

(PCT Rule 47.1(c), first sentence)

From the INTERNATIONAL BUREAU

To:

ROYSTONS
Tower Building
Water Street
Liverpool
Merseyside L3 1BA
ROYAUME-UNI

Date of mailing (day/month/year)

03 February 2000 (03.02.00)

Applicant's or agent's file reference

SMC/RC/P4108

IMPORTANT NOTICE

International application No.

PCT/GB99/02338

International filing date (day/month/year)

20 July 1999 (20.07.99)

Priority date (day/month/year)

20 July 1998 (20.07.98)

Applicant

DANMERE LIMITED et al

1. Notice is hereby given that the International Bureau has communicated, as provided in Article 20, the international application to the following designated Offices on the date indicated above as the date of mailing of this Notice:
AU,CN,EP,IL,JP,KP,KR,US

In accordance with Rule 47.1(c), third sentence, those Offices will accept the present Notice as conclusive evidence that the communication of the international application has duly taken place on the date of mailing indicated above and no copy of the international application is required to be furnished by the applicant to the designated Office(s).

2. The following designated Offices have waived the requirement for such a communication at this time:
AE,AL,AM,AP,AT,AZ,BA,BB,BG,BR,BY,CA,CH,CU,CZ,DE,DK,EA,EE,ES,FI,GB,GD,GE,GH,GM,HR,
HU,ID,IN,IS,KE,KG,KZ,LC,LK,LR,LS,LT,LU,LV,MD,MG,MK,MN,MW,MX,NO,NZ,OA,PL,PT,RO,RU,
SD,SE,SG,SI,SK,SL,TJ,TM,TR,TT,UA,UG,UZ,VN,YU,ZA,ZW
The communication will be made to those Offices only upon their request. Furthermore, those Offices do not require the applicant to furnish a copy of the international application (Rule 49.1(a-bis)).

3. Enclosed with this Notice is a copy of the International application as published by the International Bureau on
03 February 2000 (03.02.00) under No. WO 00/05718

REMINDER REGARDING CHAPTER II (Article 31(2)(a) and Rule 54.2)

If the applicant wishes to postpone entry into the national phase until 30 months (or later in some Offices) from the priority date, a demand for international preliminary examination must be filed with the competent International Preliminary Examining Authority before the expiration of 19 months from the priority date.

It is the applicant's sole responsibility to monitor the 18-month time limit.

Note that only an applicant who is a national or resident of a PCT Contracting State which is bound by Chapter II has the right to file a demand for international preliminary examination.

REMINDER REGARDING ENTRY INTO THE NATIONAL PHASE (Article 22 or 39(1))

If the applicant wishes to proceed with the international application in the national phase, he must, within 20 months or 30 months, or later in some Offices, perform the acts referred to therein before each designated or elected Office.

For further important information on the time limits and acts to be performed for entering the national phase, see the Annex to Form PCT/IB/301 (Notification of Receipt of Record Copy) and Volume II of the PCT Applicant's Guide.

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. (41-22) 740.14.35

Authorized officer

J. Zahra

Telephone No. (41-22) 338.83.38

3072789

Continuation of Form PCT/IB/308

NOTICE INFORMING THE APPLICANT OF THE COMMUNICATION OF
THE INTERNATIONAL APPLICATION TO THE DESIGNATED OFFICES

Date of mailing (day/month/year) 03 February 2000 (03.02.00)	IMPORTANT NOTICE
Applicant's or agent's file reference SMC/RC/P4108	International application No. PCT/GB99/02338

The applicant is hereby notified that, at the time of establishment of this Notice, the time limit under Rule 46.1 for making amendments under Article 19 has not yet expired and the International Bureau had received neither such amendments nor a declaration that the applicant does not wish to make amendments.

CLAIMS

1. A method of generating data for identifying a video storage media comprising the steps of (1) generating from the contents of the media a data sequence representing the picture and/or the audio and/or data content of the video medium, (2) combining said data sequence with position information and/or picture and/or text and/or data or other information.
2. A method as claimed in claim 1 in which a video frame signal is converted into an array and the part of the frame being analysed comprises a discrete array taken from the whole frame array.
3. A method as claimed in claim 1 or 2 in which the video frame is converted into a blocked array of summed pixel values.
4. A method as claimed in claim 3 in which the block array is compared with the block array of the previous frame and the value that is most changed is stored as a frame value.
5. A method as claimed in anyone of claims 1 to 4 when used to create a series of data sequences for a plurality of video storage media.
6. A method as claimed in anyone of claims 1 to 5 in which some of the data sequences which are stored in memory have appended thereto data which facilitates reproduction of the image of at least one frame of the sequence.
7. A method as claimed in claim 6 in which the memory contains stored images of a plurality of frames taken from discrete intervals along the video medium.
8. A method as claimed in claims 6 or 7 and further comprising storing audio

signals associated with at least some of said data sequences.

9. A method of generating data for identifying a video storage media as claimed in anyone of claims 1 to 8 comprising the steps of (1) reading a video storage medium and generating an electronic signal of at least part of each frame of a sequence frames of the video tape, (2) using the signal to generate a frame value for each frame in the sequence, and generating and storing a resulting frame value sequence, and (5) repeating the process for further frames of the video storage medium to generate a series of frame value sequences which are stored in memory.
10. A method as claimed in anyone of the preceding claims in which the video storage media is a video tape.
11. A method of identifying a video storage media by generating at least one data sequence from the content of the storage media and comparing the resulting data sequence with a series of data sequences stored in memory with the aim of establishing a match or relationship.
12. A method of using a related off-media data sequence or signal to determine the position and/or contents of a video tape.
13. A method of generating video storage media data substantially as hereinbefore described with reference to the accompanying drawings.
14. An index of video storage media contents stored in electronic memory or on video storage media, be it magnetic or optical, the index comprising a plurality of images corresponding to each of the contents of the a video storage medium at different positions thereof and wherein the index is adapted to be

read and displayed on a television screen, enabling the selection of one or more of a plurality of scenes of the recorded content.

15. An index as claimed in claim 14 in which more than one of the plurality of images are visible simultaneously.
16. A method of accessing material recorded on a video storage media comprising recovering from memory an index of the storage media contents and displaying on a television screen in the form of a plurality of images corresponding to different positions of the storage media, with or without accompanying text, each image having an associated data sequence or data value which defines its position on the video storage media and wherein selection of one of the images instigates a search for the corresponding position on a storage media by determining the current media position and comparing the resulting data sequence or data value with a series of data sequences or data value stored in memory until a match or a relationship is established and comparing the location thereof with the location of the selected position and instigating operation of the video storage media recorder transport according to programmed control to locate the desired position using characterisation data from the video storage media recorder or further position checks.
17. Apparatus when used to perform anyone of the methods of claims 1 to 16.
18. A closed loop video recorder or other media device control system for determining the status of a video recorder or other media device, consisting of the steps of, (1) issuing a play command or code or sequence, (2) verifying

that signals or data are received, (3) using said signals or data or absence of signals or data to determine if said video recorder or other media device is powered on.

19. A close loop control system as claimed in claim 18 further comprising the steps of, (1) checking that the tape or media position is substantially unchanged from a predetermined position, (2) issuing a record command or code or sequence.
20. A closed loop control system as claimed in 18 or 19 further comprising the step of verifying the signals or data received from said video recorder or other media device correspond to a selected program designated for recording.
21. A system for controlling a video recorder or other media device for selective enabling and disabling of associated functions, comprising the steps of, (1) periodically assessing the presence or content of signals and/or data output from said video recorder or other media device to determine if device is operating, (2) determining if said video recorder or other media device is scheduled and/or permitted to operate at time of assessing signals and/or data, (3) if required issuing a command or code or sequence to disable said video recorder or other media device by a power off command and/or a stop command and/or a pause or other command.
22. A graphical user interface adapted to display information relating to television program content and/or data content from other sources such as the Internet and video recorder or other media device content, wherein selections are made from said television program content and/or data content from other sources

for recording onto video tape or other media whereby calculation of available free space on said video tape or other media is displayed and whereby if insufficient space is available for recording original selections may be modified and/or some or all of the video tape or other media contents may be selected for overwriting.

23. A graphical user interface is adapted as claimed in 22 adapted to display the status of items recorded on video tape or other media as to whether the recorded item has been viewed.
24. A graphical user interface is adapted to display information relating to one or more video tapes or other media contents, wherein the contents of said video tape or other media is displayed either graphically or texturally according to the category of the recorded material, said category could be the type of recorded material or whether the item is suitable for a particular age of viewer or whether the items have been viewed or any other criteria.
25. A graphical user interface adapted to display information relating to television program content and/or data content from other sources such as the Internet and/or video recorder or other media device content, wherein said display information comprises a visual representation such as a picture indicating the contents of said television program content and/or data content from other sources such as the Internet and/or video recorder or other media device content.
26. A graphical user interface as claimed in claim 25 in which said visual representations are stored in memory, at least temporarily, to permit on-screen

display.

27. A graphical user interface as claimed in claims 25 or 26 wherein the graphical user interface is adapted to display program content information by category such as what is currently showing and/or what will be showing next and/or what is showing that day and/or what will be showing that week.
28. A graphical user interface adapted to display information as claimed in claims 25, 26 or 27 further adapted to filter said television program content by category of user preferences such as channel number or type of television program or other category.
29. A video recorder or other media device index generation method comprising the steps of, (1) recording a television broadcast, (2) recording in a memory means a copy of subtitling or closed caption data, (3) using said subtitling or closed caption data to search for key words or phrases to identify a scene from one or more video tapes or other media corresponding to said key word, (4) issuing a command or code or sequence to position said video tape or other media at the scene corresponding to said key word.